

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A blood treatment system, comprising:

a blood treatment machine having a first opposing portion with a first surface and a second opposing portion with a second surface, the first and second opposing portions being spaced apart such that the first surface is parallel to the second surface with a gap formed therebetween, said first surface and said second surface being adjacent to the gap and facing each other;

said blood treatment machine having at least one actuator and at least one sensor disposed on at least said first opposing portion;

a support attached to said blood treatment machine;

a cartridge panel holding a fluid circuit, said fluid circuit having at least one portion to be aligned with said at least one actuator and at least another portion to be aligned with said at least one sensor prior to engagement therebetween;

said support being configured to permit said cartridge panel to be rested thereupon when said cartridge panel is inserted in said gap;

said support and said cartridge panel being configured such that said fluid circuit at least one and at least another portions are aligned respectively with said at least one actuator and said at least one sensor;

said blood treatment machine first and second opposing portions being movable with respect to each other to close around said cartridge panel thereby to

cause said at least one actuator to engage said at least one portion and said at least one sensor to engage said at least another portion, said first and second surfaces remaining parallel to one another during movement of the first and second opposing portions.

2. (Original) A system as in claim 1, wherein said at least one actuator includes multiple peristaltic pumps.

3. (Original) A system as in claim 1, wherein said first and second opposing portions are connected by rails at bottom ends thereof and said support includes at least a portion of said rails.

4. (Original) A system as in claim 1, wherein:  
 said first and second opposing portions are movable in a single motion;  
 said fluid circuit at least one portion includes at least three tube portions configured to be engaged with peristaltic pumps;  
 said at least one actuator includes at least three peristaltic pumps;  
 whereby said tube portions and said peristaltic pumps are caused to be engaged by a movement of said first and second opposing portions.

5. (Previously Presented) A system as in claim 1, wherein said cartridge panel includes cutouts to expose said fluid circuit at least one and said at least another portions to said at least one actuator and said at least one sensor, respectively.

6. (Previously Presented) A system as in claim 1, wherein said blood treatment machine is configured to substantially equalize a quantity of fluid removed from a patient with a quantity of fluid added to the patient during a blood treatment.

7. (Canceled)

8. (Previously Presented) A system as in claim 23, wherein said at least one actuator includes multiple peristaltic pumps.

9. (Previously Presented) A system as in claim 4, wherein said first and second opposing portions are connected by rails at bottom ends thereof and said support includes at least a portion of said rails.

10. (Previously Presented) A system as in claim 6, wherein:  
said first and second opposing portions are movable in a single motion;  
said fluid circuit at least one portion includes at least three tube portions configured to be engaged with peristaltic pumps;  
said at least one actuator includes at least three peristaltic pumps;  
whereby said tube portions and said peristaltic pumps are caused to be engaged by a movement of said first and second opposing portions.

11. (Previously Presented) A system as in claim 23, wherein said cartridge panel includes cutouts to expose said fluid circuit at least one and said at least another portion to said at least one actuator and said at least one sensor, respectively.

12. (Previously Presented) A system as in claim 23, wherein said blood treatment machine is configured to substantially equalize a quantity of fluid removed from a patient with a quantity of fluid added to the patient during a blood treatment.

Claims 13-15. (Canceled).

16. (Currently Amended) A blood treatment system, comprising:  
a blood treatment machine with first and second opposing portions spaced apart to form a gap therebetween;

the blood treatment machine having at least one actuator and at least one sensor disposed on at least the first opposing portion, the at least one actuator including at least one pump;

a disposable cartridge panel that supports and holds a fluid circuit, the fluid circuit having at least one portion to be aligned with the at least one actuator and at least another portion to be aligned with the at least one sensor prior to engagement therebetween;

a support attached to the blood treatment machine and configured to permit the cartridge panel to be rested thereupon when the cartridge panel is inserted in the gap;

the support and the cartridge panel being configured such that the fluid circuit at least one and at least another portions are aligned respectively with the at least one actuator and the at least one sensor;

the blood treatment machine first and second opposing portions being movable with respect to each other to close around the cartridge panel thereby to cause the at

least one actuator to engage the at least one portion and the at least one sensor to engage the at least another portion,

wherein said second opposing portion carries a user interface panel, and the first and second opposing portions are slidably interconnected.

17. (Previously Presented) The system of claim 16, wherein the at least one actuator includes at least two pumps.

18. (Previously Presented) The system of claim 1, wherein the second opposing portion carries a user interface panel.

19. (Previously Presented) The system of claim 16, wherein the first opposing portion constitutes a major portion of the blood treatment machine and the second opposing portion is movably attached to the first opposing portion.

20. (Previously Presented) The system of claim 16, wherein the first and second opposing portions have opposing facing surfaces that lie adjacent the cartridge panel, which opposing facing surfaces are parallel and remain parallel when closed around the cartridge panel.

21. (Canceled).

22. (Previously Presented) The system of claim 16, wherein the first and second opposing portions are slidably interconnected by rails.

23. (Previously Presented) A blood treatment system, comprising:

a blood treatment machine with first and second opposing portions spaced apart to form a gap therebetween;

said blood treatment machine having at least one actuator and at least one sensor disposed on at least said first opposing portion;

a support attached to said blood treatment machine;

a cartridge panel holding a fluid circuit, said fluid circuit having at least one portion to be aligned with said at least one actuator and at least another portion to be aligned with said at least one sensor prior to engagement therebetween;

said support being configured to permit said cartridge panel to be rested thereupon when said cartridge panel is inserted in said gap;

said support and said cartridge panel being configured such that said fluid circuit at least one and at least another portions are aligned respectively with said at least one actuator and said at least one sensor;

said blood treatment machine first and second opposing portions being movable with respect to each other to close around said cartridge panel thereby to cause said at least one actuator to engage said at least one portion and said at least one sensor to engage said at least another portion;

wherein said first and second opposing portions are connected by rails at bottom ends thereof and said support includes at least a portion of said rails.

24. (Previously Presented) The system of claim 23, wherein the second opposing portion carries a user interface panel.